

COMMUNICATION PROTOCOL FOR SERIAL PERIPHERAL DEVICES

ABSTRACT OF THE DISCLOSURE

A computing system comprising a host device which includes a serial communication bus and a processor for controlling communication over the serial communication bus. The computing system further comprises one or more peripheral devices connected to the communication bus. Communication between the host device and the peripheral devices is facilitated by a communication protocol, which includes a procedure for discovering whether the configuration of peripheral devices connected to the communication bus has changed. The discovery procedure starts by the host device sending a first command to all peripheral devices connected to the serial communication bus to determine if the configuration of any of the peripheral devices has changed. If a new peripheral device has been added to the communication bus, the host sends a focus command to a first comm bus port on the communication bus to focus that particular port. The host then sends a command to the first Comm bus port to determine if a valid peripheral device is connected to that port. If a valid peripheral device is connected to the first comm bus port, the host obtains device configuration information from the first valid peripheral device. If the first valid peripheral device does not include a device ID from the host, the host assigns a device ID to the first Valid peripheral device. In addition, the host will set-up driver software for the first valid peripheral device, if necessary. This procedure is repeated until all devices on the communication bus have been checked, and initialized, if necessary.